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CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
OREGON

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE
and
OREGON STATE UNIVERSITY
and
STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

||||||| AS OF |||||
JUNE 1, 1963

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 4170, Portland 8, Oregon.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RIGHTS BR., DEPT. OF LANDS, FORESTS AND NATURAL RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
OREGON

ISSUED

JUNE 8, 1963

Report prepared by

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and

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SOIL CONSERVATION SERVICE
209 S.W. 5TH AVE., PORTLAND 4, OREGON

Issued by

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STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE

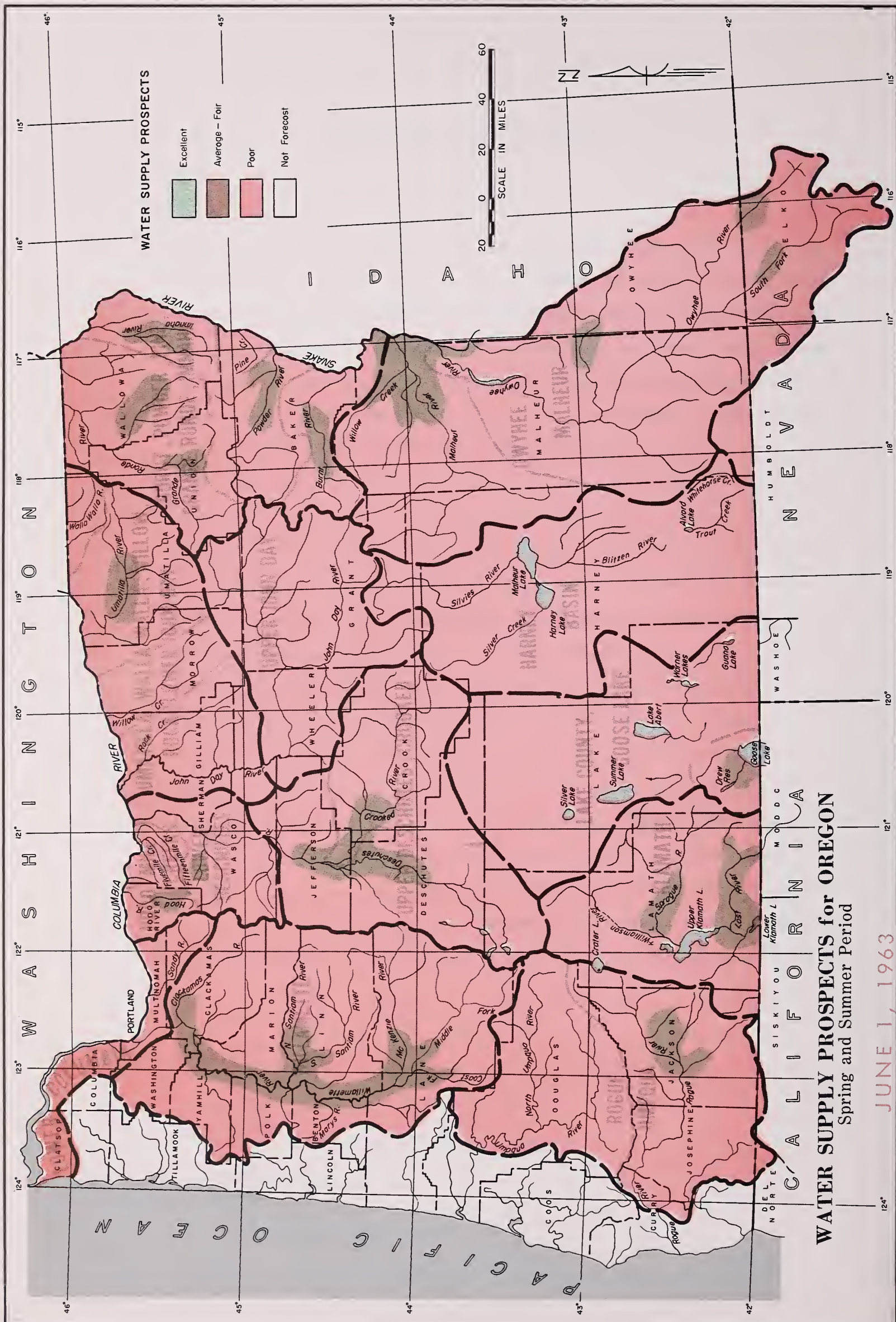
F. EARL PRICE
DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

CHRIS L. WHEELER
STATE ENGINEER
STATE OF OREGON



TABLE OF CONTENTS

	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
STORAGE STATUS OF OREGON RESERVOIRS.....(MAP).....	3
MOUNTAIN SOIL MOISTURE IN OREGON.....(MAP).....	4
VALLEY PRECIPITATION IN OREGON.....(MAP AND TABLE).....	5
CURRENT OREGON STREAMFLOW.....(GRAPH).....	6
DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS	
OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROQUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
PREVIOUSLY UNPUBLISHED AND ERRATA SNOW DATA.....	APPENDIX
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....	INSIDE BACK COVER



WATER SUPPLY OUTLOOK for OREGON

JUNE 1, 1963

Oregon's 1963 water supply outlook has changed greatly this year from a gloomy mid-winter prospect to a currently satisfactory situation for most lands served from stored water supplies. However, thousands of acres of land depending on natural flow of streams will have severe late season shortages unless unexpected rains fall at opportune times.

The improvement in water supply outlook began about March 29 with the beginning of heavy precipitation over much of the state. Frequent and abnormally heavy storms continued to add moisture until about mid-May. Most of this moisture came as rain with snowfall confined mostly to high mountain watersheds.

SNOW COVER

Most of the scanty mountain snowpack has melted off in the abnormally warm weather which began about mid-May. Remaining snow cover is found only at the highest elevations and is far below the average.

SOIL MOISTURE

Moisture in the soil-mantle of the upper watersheds is holding up much better than usual. These wet conditions will favor good runoff from each contributing storm and from the remaining snowpack. Wet soils are preventing normal agricultural operations in Harney and Lake counties.

RESERVOIR STORAGE

Water stored in 20 major irrigation reservoirs is 89 percent of the 15 year average (1943-57) and 108 percent of last year on June 1. Stored water is adequate for most needs except for lands served from McKay Reservoir in Umatilla county and Agency Valley and Warm Springs Reservoirs in Malheur county, where water supplies are barely sufficient for an average season.

STREAMFLOW

Preliminary figures of streamflow* for May vary from 44 percent of the 15 year average (1943-57) on the Owyhee to 223 percent average on the Umpqua.

Forecasts of expected streamflow, May through September, vary from 39 percent of average on the Owyhee or 83,000 acre feet to 105 percent on the Sprague near Chiloquin or 200,000 acre feet.

All forecasts assume average precipitation and temperature during the runoff period.

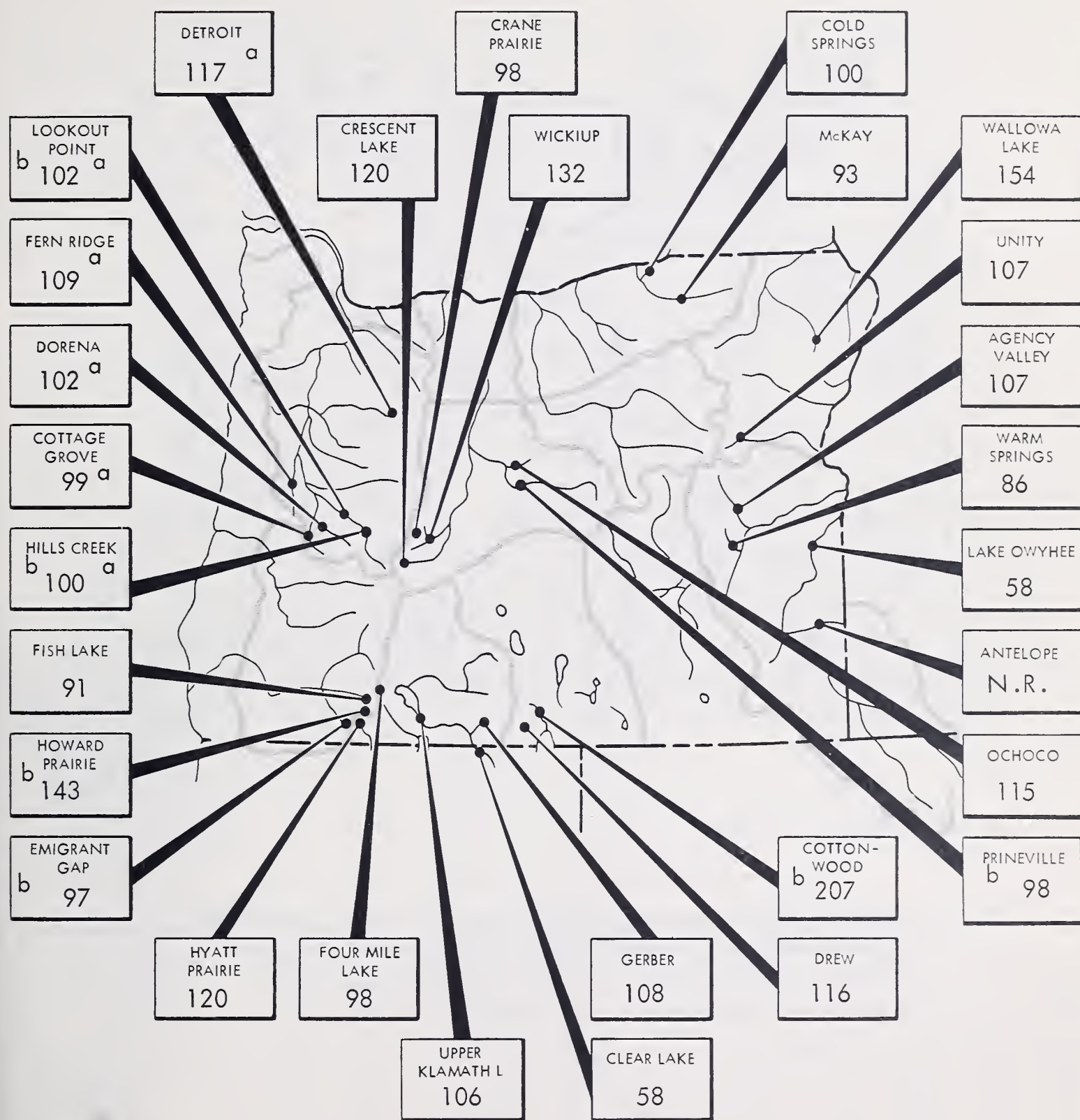
The next report on water supply conditions in Oregon will be issued at the close of the irrigation season early in October.

* Preliminary data furnished by U. S. Geological Survey, Portland, Oregon and the Owyhee Project, Nyssa, Oregon.



STORAGE STATUS of OREGON RESERVOIRS as percent of 1943-57, 15 year average

JUNE 1, 1963



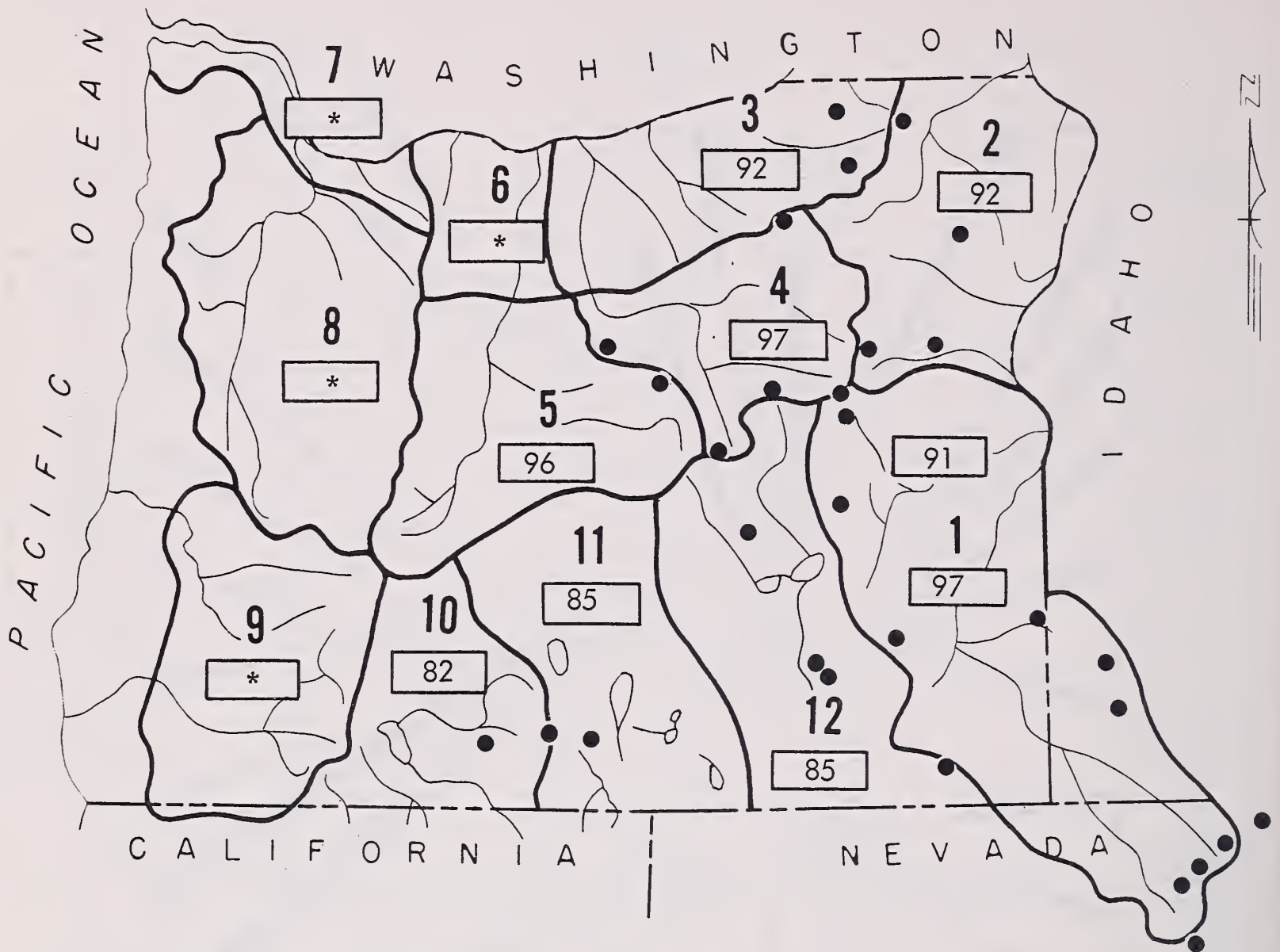
(a) Multiple purpose reservoir - space reserved primarily for flood runoff.

(b) Short record - compared with last year on this date.

N.R. - No report.

MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

JUNE 1, 1963



● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

Note: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

VALLEY PRECIPITATION in OREGON ^a

JUNE 1, 1963



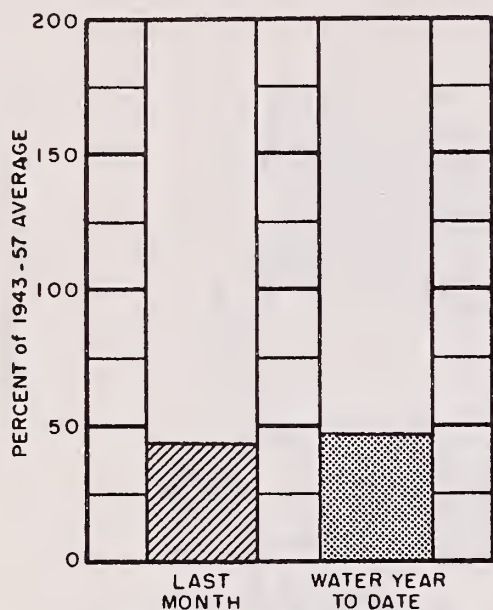
PRECIPITATION as PERCENT of the 1943 - 57 AVERAGE

STATION	LAST MONTH	WATER YEAR TO DATE ^b	STATION	LAST MONTH	WATER YEAR TO DATE ^b
BAKER	76	109	LAKEVIEW	194	159
BEND	105	105	MEDFORD APT.	150	135
BURNS	214	153	NYSSA	66	111
ENTERPRISE	84	103	PENDLETON APT.	48	99
EUGENE APT	217	105	PORTLAND APT.	142	94
HEPPNER	96	124	ROSEBURG APT.	212	99
JOHN DAY	89	131	SALEM APT.	193	97
KLAMATH FALLS	65	100	THE DALLES	63	90

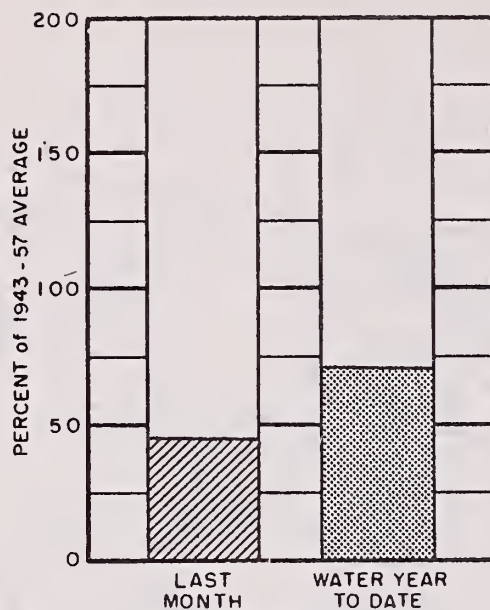
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

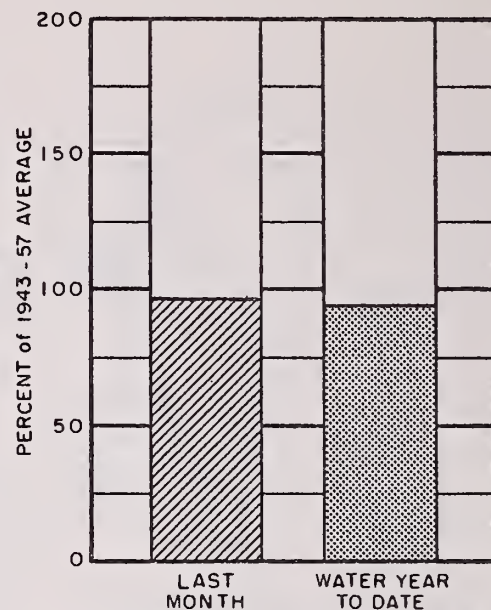
JUNE 1, 1963



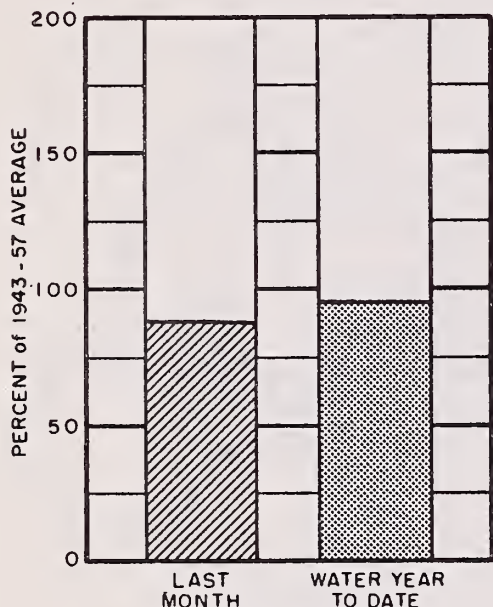
Owyhee Lake net inflow



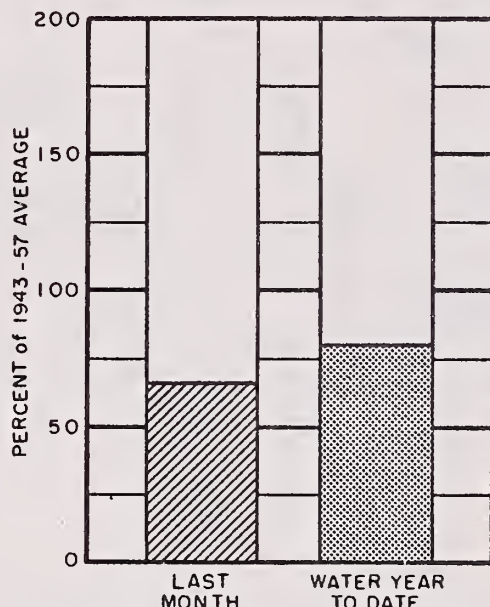
Umatilla near Umatilla



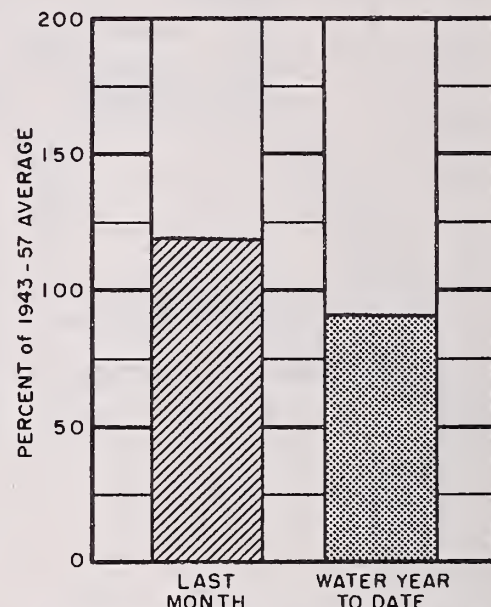
John Day at Service Creek



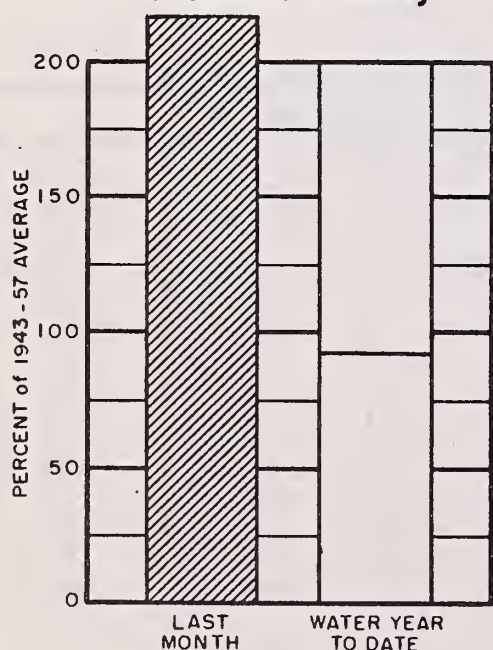
Deschutes at Moody



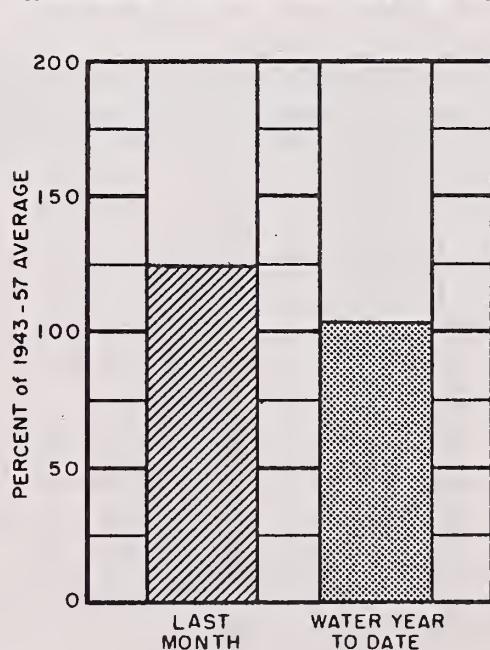
Hood and conduit near Hood River



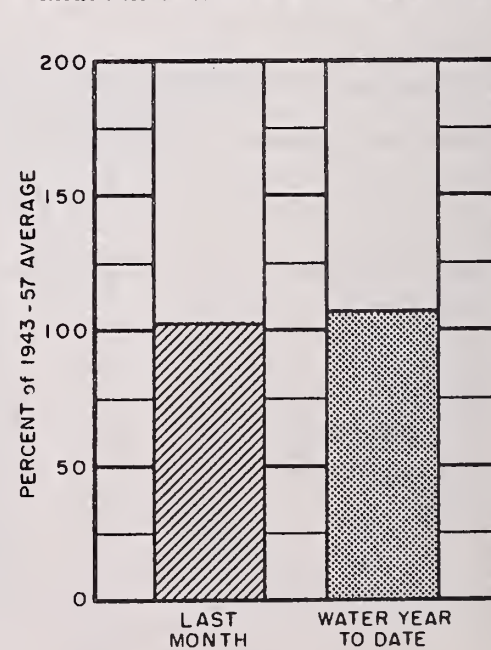
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of
JUNE 1, 1963



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1963 water supply outlook in Malheur county has changed greatly this year from an extremely gloomy mid-winter prospect to a reasonably satisfactory situation for most lands served from stored water supplies. Severe late season shortages are definitely expected for lands dependent upon natural streamflow.

SNOW COVER

Mountain snowcover melted rapidly, except at the extremely high elevations, when mid-May temperatures became excessively warm. Very little snow remains in the mountains as of this date.

SOIL MOISTURE

Upper watershed soils, close to the point of saturation, have assisted considerably in boosting the runoff from snowmelt and rainfall.

RESERVOIR STORAGE

Water stored in Lake Owyhee now totals 348,200 acre feet compared with 404,200 a.f. one year ago on June 1st. With careful use this supply, coupled with pumped water, should satisfy the 4 foot allotment to irrigators.

Stored water in Warm Springs and Agency Valley reservoirs has increased very well during May and now totals 175,000 acre feet compared with 133,000 a.f. one year ago. This supply should bolster the plan to allot 2.4 feet to each irrigated acre in the Vale-Oregon and Warm Springs Irrigation Districts.

No reports are available on either Antelope or Malheur Lake reservoirs.

STREAMFLOW

Runoff during the month of May has been only 44 percent of the 15 year average (1943-57) on the Owyhee River according to the North Board of Control at Nyssa.

Forecasts of streamflow have been raised with the Owyhee expected to produce 83,000 acre feet or 39 percent of average for the May-September period.

The Malheur at Drewsey is forecast to flow 30,000 acre feet or 83 percent average May-September. The North Fork is forecast at 32,000 a.f. or 84 percent average for the same period.

The next report on water supply conditions in Malheur county will be issued at the close of the irrigation season in early October.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Fair	Poor
Bully Creek	Fair	Poor
Cow Creek	Fair	Poor
Jordan Creek	Fair	Poor
Jordan Valley Irrig. Dist.	Average	Fair
McDermitt Creek	Fair	Poor
Oregon Canyon Creek	Fair	Poor
Owyhee Project	Average	Average
Succor Creek	Fair	Poor
Tenmile Creek	Fair	Poor
Vale Oregon Irrig. Dist.	Average	Fair
Warm Springs Irrig. Dist.	Average	Fair
Willow Creek (Reservoired)	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Agency Valley	60.0	57.5	44.9	53.3
Antelope	55.0	f	45.1	- -
Owyhee	715.0	348.2	404.2	604.8
Warm Springs	191.0	117.5	88.1	136.2

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
2140	Malheur near Drewsey	30	May-Sept.	36	83
		29	May-July	35	83
2175	Malheur, North Fork at Beulah ^d	32	May-Sept.	38	84
1825	Owyhee Reservoir net Inflow ^g	83	May-Sept.	214	39
		78	May-July	196	40

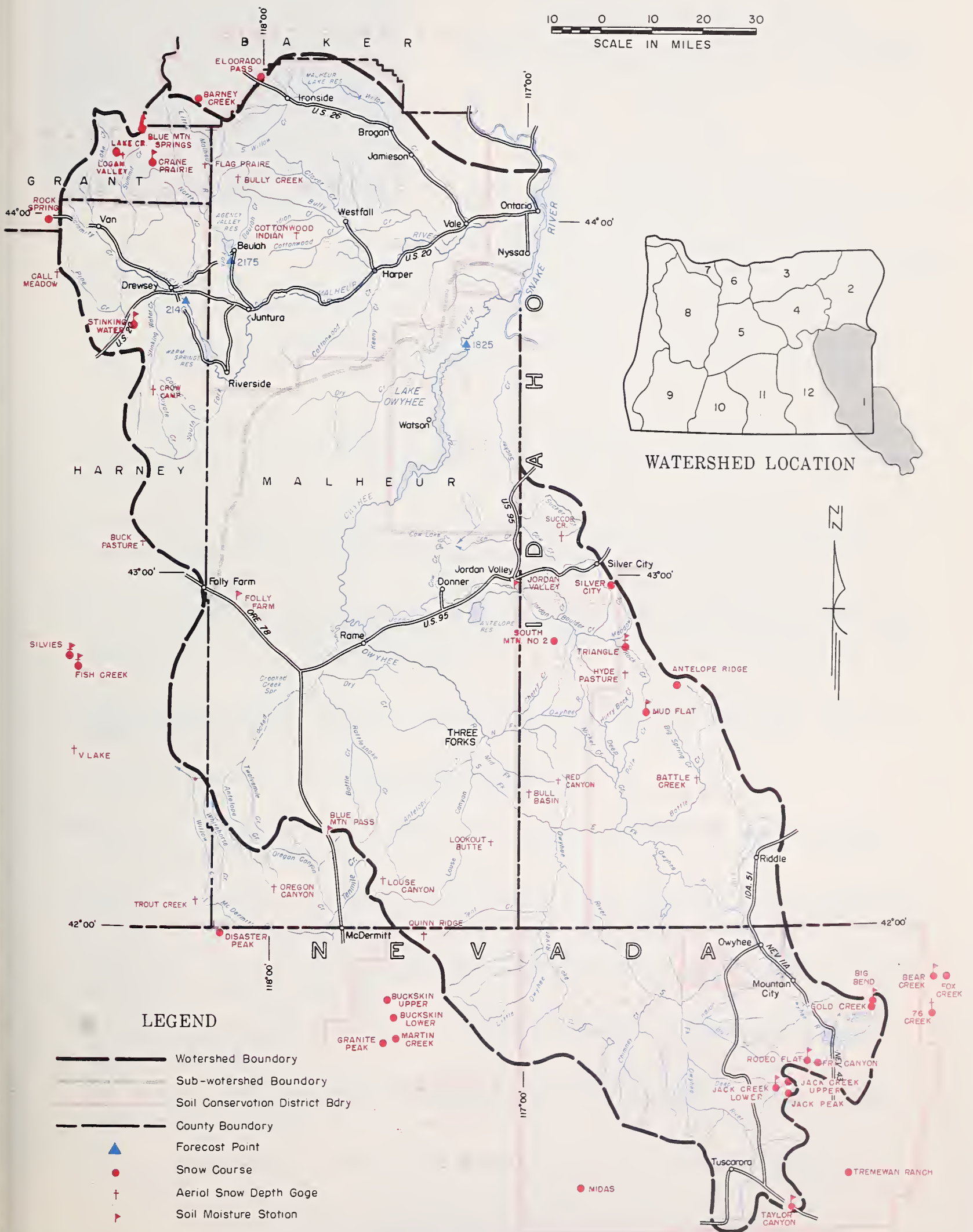
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bear Creek (Nev.)	7800	72	16.9	4-1-63	7.8 ⁱ	9.6	8.6
Big Bend (Nev.)	6700	48	16.7	4-30-63	16.1 ⁱ	16.5	16.3
Blue Mountain Springs	5900	42	16.9	5-27-63	14.3	13.8	13.4
Crane Prairie	5375	48	18.2	5-27-63	17.5	17.7	17.6
Folly Farm	4450	30	12.5	3-28-63	9.9 ⁱ	11.6	- -
Jack Creek, Lower (Nev.)	6800	48	8.7	4-29-63	8.6 ⁱ	8.6	8.5
Jordan Valley	4250	48	19.3	3-27-63	16.7 ⁱ	- -	- -
Mud Flat (Ida.)	5500	48	12.8	4-2-63	10.5 ⁱ	8.5	9.7
Rodeo Flat (Nev.)	6800	42	11.0	4-30-63	10.9 ⁱ	11.0	11.0
Stinking Water	4800	48	21.9	3-28-63	21.5 ⁱ	21.9	- -
Taylor Canyon (Nev.)	6200	48	15.1	4-29-63	14.2 ⁱ	14.9	13.8
Triangle (Ida.)	5150	48	16.2	4-2-63	14.4 ⁱ	- -	- -

NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) USBR records of inflow. (h) Not surveyed. (i) Nearest current data. (j) Partly estimated. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of
JUNE 1, 1963



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook in Baker, Union, and Wallowa counties has changed greatly this year, from extremely gloomy at mid-winter, to near average for lands served by reservoir stored water. Late season shortages are expected however for lands depending on natural flow of smaller streams in the area.

SNOW COVER - Mountain snow cover has melted at all except the highest elevations. Warm mid-May temperatures and rainfall very rapidly removed snow, which fell late in the season.

SOIL MOISTURE - Upper watershed soils, close to the saturation point, have greatly assisted in boosting the runoff from snowmelt and rainfall.

RESERVOIR STORAGE - Unity Reservoir received better than expected inflow during May and now holds 24,200 acre feet compared to 21,800 a.f. at this time last year. The average for June 1 is 22,600 acre feet.

Wallowa Lake now has 38,700 acre feet compared with 20,900 last year. The June 1 average is 25,200 acre feet.

No report was received on Thief Valley Reservoir.

STREAMFLOW - Runoff was much better than expected in May and streamflow forecasts were raised accordingly.

Burnt River is expected to flow 11,500 acre feet or 60 percent of the May-September average. Powder River is now forecasted at 77 percent of average or 34,000 acre feet.

Catherine Creek and the Grande Ronde are forecasted at 68 and 67 percent or 39,000 and 78,000 acre feet respectively.

The Wallowa East Fork is forecast at 88 percent or 10,600 acre feet for the April-September period.

The Imnaha is expected to flow 250,000 acre feet or 80 percent of average for the April-September period.

The next water supply outlook will be issued at the end of the irrigation season early in October.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Fair	Fair
Baker Valley	Fair	Poor
Big Creek	Fair	Poor
Clover Creek (nr. N. Powder)	Fair	Poor
Cove	Fair	Poor
Durkee	Fair	Poor
Eagle Valley	Fair	Poor
Elgin	Fair	Poor
Enterprise-Joseph	Average	Fair
Hereford-Bridgeport	Average	Fair
Imnaha River	Average	Fair
LaGrande-Island City	Fair	Poor
Lostine-Wallowa	Average	Fair
No. Powder R.-Wolf Cr.	Fair	Poor
Pine Valley	Fair	Poor
Powder River-Elk Creek	Fair	Poor
Summerville	Fair	Poor
Sumpter Valley	Fair	Poor
Union-Hot Lake	Fair	Fair
Unity	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Unity	25.2	24.2	21.8	22.6
Wallowa Lake	37.5	38.7	20.9	25.2

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
3305	Bear near Wallowa	64	April-Sept.	74	86
2730	Burnt near Hereford ^d	11.5	May-Sept.	19	60
		11.0	May-June	15	73
3200	Catherine near Union	39	May-Sept.	57	68
3190	Grande Ronde at La Grande	80	May-Sept.	119	67
		78	May-July	116	67
3295	Hurricane near Joseph	40	April-Sept.	49	82
2920	Imnaha at Imnaha	250	April-Sept.	314	80
3300	Lostine near Lostine	116	April-Sept.	133	87
2755	Powder near Baker	34	May-Sept.	44	77
		33	May-July	43	77
3250	Wallowa, East Fork near Joseph ^d	10.6	April-Sept.	12.1	88
		8.5	April-July	9.7	88

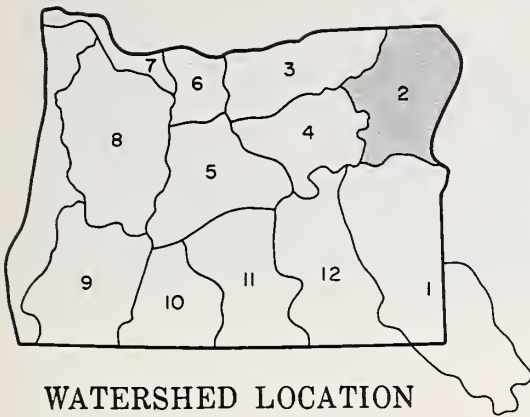
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Summit	5100	36	16.8	4-30-63	15.6 ⁱ	11.4	16.1
Emigrant Springs	3925	48	22.3	4-26-63	20.8 ⁱ	21.5	21.8
Tollgate	5070	48	22.2	4-29-63	20.1 ⁱ	20.0	20.5

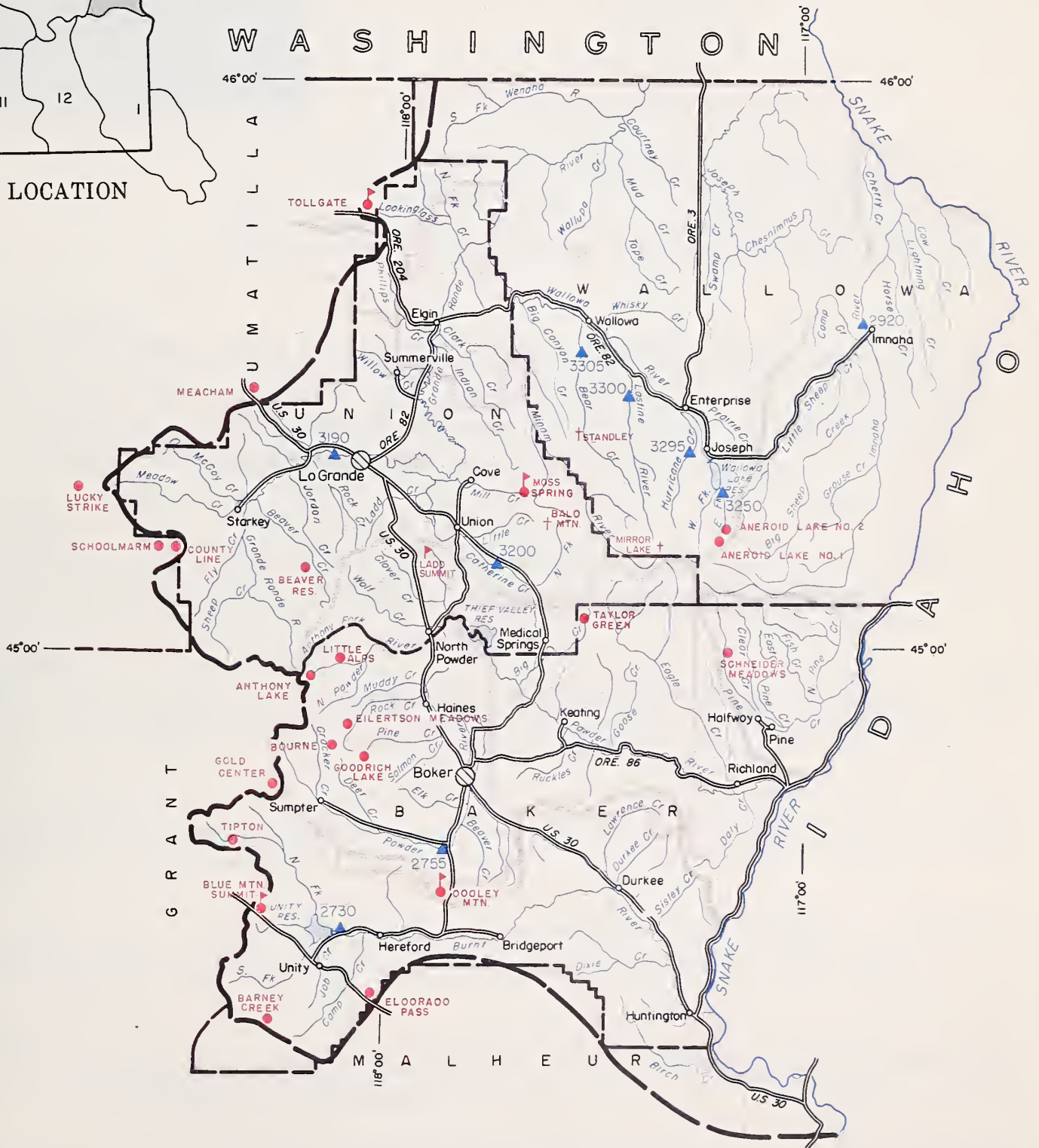
NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Water content partly estimated. (h) Not surveyed. (i) Nearest current data. (j) Partly estimated. (*) 1943-57 Adjusted averages.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⬮ Soil Moisture Station
- ⬮ Aerial Snow Depth Gage

WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of
JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1963 water supply outlook in Umatilla, Morrow and Gilliam counties has changed greatly this year from an extremely gloomy mid-winter prospect to a reasonably satisfactory situation for most lands served from stored water supplies. Severe late season shortages are foreseen for lands dependent upon natural streamflow.

SNOW COVER

A few abnormally warm days about mid-May removed all but a few patches of snow in the higher mountains. This year's "short" snowpack disappeared very rapidly.

SOIL MOISTURE

Moisture in the soil-mantle on the upper watersheds has been close to saturation. These wet soils have greatly assisted in the runoff from rains and from the light snowpack.

RESERVOIR STORAGE

Cold Springs Reservoir has 46,300 acre feet of water ready for use compared with 50,000 acre feet at this date last year.

McKay Reservoir has 63,500 acre feet in storage compared with 55,400 a.f. one year ago. These supplies will be adequate only if careful use is made of the water.

STREAMFLOW

Flow of the Umatilla near Umatilla* has been 46 percent of the May average and only 71 percent of the October-May average.

Forecast of flow of the Umatilla at Pendleton for the May-September period is 55,000 acre feet or 56 percent of average.

The South Fork of the Walla Walla is forecast at 37,000 acre feet or 64 percent of average May through September.

Butter Creek has been having a strong flow and is now forecast to produce 5,500 acre feet May through September or 112 percent of average.

The next report on water supply conditions in the Umatilla-Walla area will be issued at the close of the irrigation season early in October.

* Preliminary data from U. S. Geological Survey, Portland, Oregon.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Birch Creek	Average	Poor
Butter Creek	Average	Poor
Dry Creek	Fair	Poor
Dugger Creek	Fair	Poor
Johnson Creek	Fair	Poor
McKay Creek	Fair	Poor
Mill Creek	Fair	Poor
Mud Creek	Fair	Poor
Pine Creek	Fair	Poor
Rhea Creek	Fair	Poor
Rock Creek	Fair	Poor
Umatilla R. (Cold Spgs. Res.)	Average	Fair
Umatilla River, Main	Fair	Poor
Umatilla River (McKay Res.)	Average	Fair
Walla Walla River, Little	Fair	Poor
Walla Walla River, Main	Fair	Poor
Walla Walla River, N. Fork	Fair	Poor
Walla Walla River, S. Fork	Fair	Poor
Willow Creek	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Cold Springs	50.0	46.3	50.0	46.5
McKay	73.8	63.5	55.4	68.0

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
0320	Butter Creek near Pine City	5.5	May-Sept.	4.9	112
0225	McKay near Pilot Rock	9.5	May-July	13.5	70
0200	Umatilla near Gibbon	35	May-Sept.	59	59
0210	Umatilla at Pendleton	55	May-Sept.	99	56
		53	May-July	94	56
0100	Walla Walla, South Fork near Milton	37	May-Sept.	58	64
		29	May-July	44	65

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Athena-Weston	1700	48	18.7	4-29-63	15.9 ^g	15.5	16.2
Battle Mountain Summit	4340	48	13.8	4-25-63	13.8 ^g	13.2	13.0
Emigrant Springs	3925	48	22.3	4-26-63	20.8 ^g	21.5	21.8
Toilgate	5070	48	22.2	4-29-63	20.1 ^g	20.0	20.5

NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Nearest current data. (h) Partly estimated. (*) 1943-57 adjusted average. (**) Average for 5 or more years in base period.

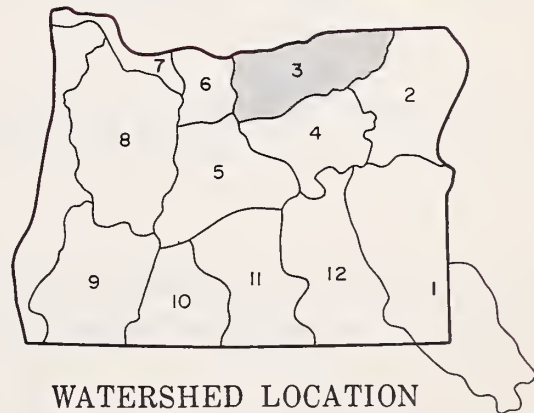
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of
JUNE 1, 1963



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1963 water supply outlook for the Upper John Day area continually improved since a "gloomy" early April outlook. Late season water shortages are still expected however, unless timely rains continue to fall during the season.

SNOW COVER

The "short" snowpack has been removed from all but the highest and most protected areas by a few abnormally warm days in early May.

SOIL MOISTURE

Soil moisture is holding up better than average due to above normal spring rainfall over most of the watershed and will continue to produce good runoff from any rains in the next few weeks.

STREAMFLOW

The John Day at Service Creek* flowed 96 percent of average last month and 95 percent of the October 1-June 1 average.

Streamflow forecasts have been raised again during May as a result of a period of warm weather coupled with rainfall which melted most of the short snowpack in the area.

The John Day at Prairie City is now expected to flow 35,000 a.f. or 65 percent of the April-September average and 80,000 a.f. or 59 percent at Ritter for the same April-September period.

Strawberry Creek near Prairie City is forecast at 70 percent or 6,400 a.f. for the April-September period.

The next report on water supply conditions in this area will be issued at the close of the irrigation season in October.

* Preliminary streamflow data furnished by U. S. Geological Survey, Portland, Oregon.

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

[illegible]

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
NO.	NAME				
0385	John Day at Prairie City	35	April-Sept.	54	65
		33	April-July	49	67
0440	John Day, Middle Fork at Ritter	80	April-Sept.	135	59
		79	April-July	131	60
0375	Strawberry near Prairie City	6.4	April-Sept.	9.1	70

SOIL MOISTURE

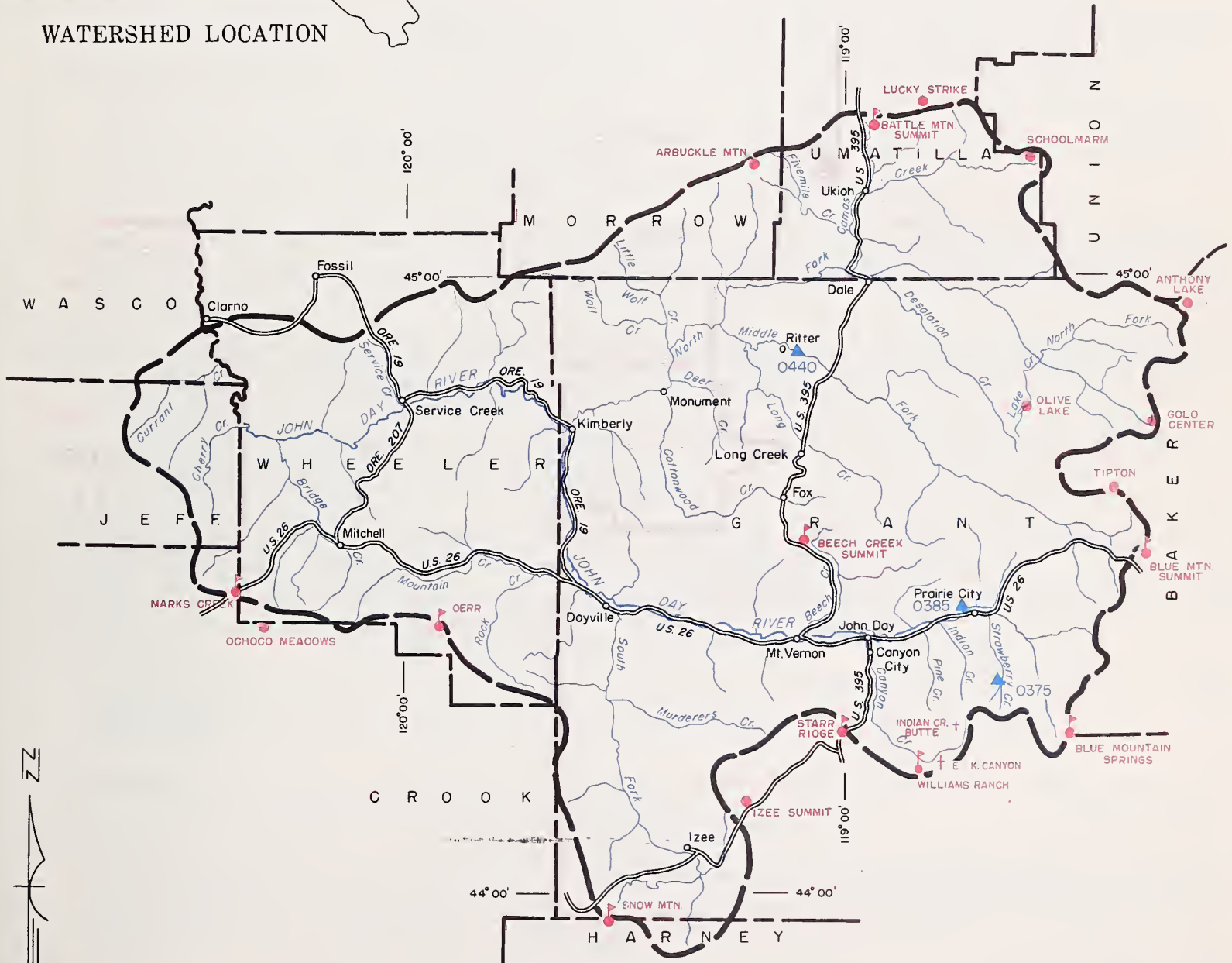
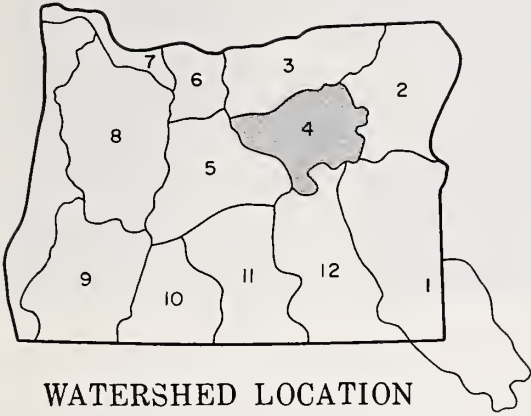
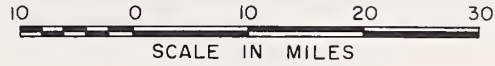
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mountain Summit	4340	48	13.8	4-25-63	13.8 ^h	13.2	13.0
Blue Mountain Springs	5900	42	16.9	5-27-63	14.3	13.8	13.4
Blue Mountain Summit	5100	36	16.8	4-30-63	15.6 ^h	11.4	16.1
Marks Creek	4540	36	14.1	4-26-63	13.5 ^h	13.3	13.5
Snow Mountain	6300	48	16.7	3-25-63	14.9 ^h	15.0	- -
Starr Ridge	5150	36	10.6	5-27-63	10.3	10.4	10.1

NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Not surveyed. (h) Nearest current data. (i) Partly estimated. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Soil Moisture Station
- † Aerial Snow Depth Gage



WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of
JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook for the Deschutes-Crookea River watersheds continues to improve over the "short" supplies in prospect as late as April 1.

Periods of warm weather coupled with rain showers has depleted the "short" snowpack while resulting in higher May streamflow than was expected.

Lands served from reservoir stored water supplies will have a "near average" irrigation season but irrigators using natural streamflow are still expected to have late season water shortages.

SNOW COVER - Snow cover remains at only the highest and most protected areas of the watersheds after periods of abnormally warm weather in May.

SOIL MOISTURE - Watershed soils are better primed this year than for several years and will aid runoff from future storms or snowmelt.

RESERVOIR STORAGE - Storage on the main Deschutes is 104 percent of last year on June 1 and 122 percent of the 1943-57 average. Crane Prairie has 47,000 a.f. as compared to 29,800 last year. Crescent Lake has 60,600 acre feet and had 48,800 last year. Wickiup holds 172,900 a.f. and had 190,000 acre feet last year at this time.

Ochoco Reservoir has 45,100 acre feet compared to 47,000 at this time last year. Prineville Reservoir has 152,500 acre feet and had 155,300 last year on June 1.

STREAMFLOW - Warm weather and rain showers produced heavier than expected streamflow during May resulting in increases in streamflow forecasts.

The Crooked is now expected to flow 49,000 acre feet or 100 percent of the average for May-September. The inflow to Ochoco Reservoir has been raised to 14,000 a.f. or 88 percent of average for the same period.

Crane Prairie inflow is expected to be 86,000 a.f. or 60 percent for the April-September period. Crescent Creek is forecasted at 65 percent or 20,000 a.f. for the same period.

The Deschutes at Benham Falls forecast is 70 percent or 420,000 acre feet and the Little Deschutes is expected to flow 68,000 acre feet or 60 percent of the April-September average.

Odell Creek is now expected to flow 26,000 acre feet or 75 percent. Squaw and Tumalo are forecasted at 67 and 64 percent respectively.

Report prepared by
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Fair
Bear Creek	Fair	Poor
Beaver Creek	Fair	Poor
Camp Creek	Fair	Poor
Central Ore. Irrig. Dist.	Average	Fair
Crooked River (abv. Res.)	Average	Poor
Deschutes River	Fair	Poor
Hay-Trout Creeks	Fair	Poor
Lone Pine Irrig. Dist.	Average	Fair
Mill Creek	Fair	Poor
North Unit Irrig. Dist.	Average	Fair
Ochoco Creek	Average	Poor
Plainview-McCallister	Average	Poor
Sisters Irrigation Dist.	Average	Fair
Snow Creek Irrig. Dist.	Average	Fair
Squaw Creek Irrig. Dist.	Average	Fair
Swalley Ditch	Average	Average
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Crane Prairie	55.3	47.0	29.8	47.9
Crescent Lake	117.2	60.6	48.8	50.3
Ochoco	47.5	45.1	47.0	39.2
Prineville	153.0	152.5	155.3	- -
Wickiup	182.0	172.9	190.0	131.1

Note: The U. S. Bureau of Reclamation indicates that dead storage in the amount of 5360 acre feet may be included in the current storage figure for Crescent Lake.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	86	April-Sept.	143	60
0600	Crescent at Crescent Lake ^d	20	April-Sept.	31	65
		16.8	April-July	25	67
0795	Crooked near Post	49	May-Sept.	49	100
		47	May-July	47	100
0645	Deschutes at Benham Falls ^d	420	April-Sept.	602	70
		285	April-July	404	71
0500	Deschutes below Snow Creek	44	April-Sept.	74	60
0630	Deschutes, Little near Lapine ^d	68	April-Sept.	113	60
		61	April-July	100	61
0848	Ochoco Reservoir net Inflow	14.0	May-Sept.	16.0	88
0555	Odell near Crescent	26	April-Sept.	34	75
0750	Squaw near Sisters	37	April-Sept.	55	67
0730	Tumalo near Bend ^d	35	April-Sept.	55	64

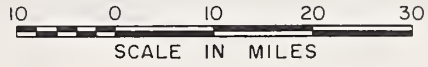
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Marks Creek	4540	36	14.1	4-26-63	13.5 ^h	13.3	13.5
Snow Mountain	6300	48	16.7	3-25-63	14.9 ^h	15.0	- -

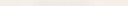

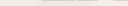
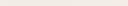



NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

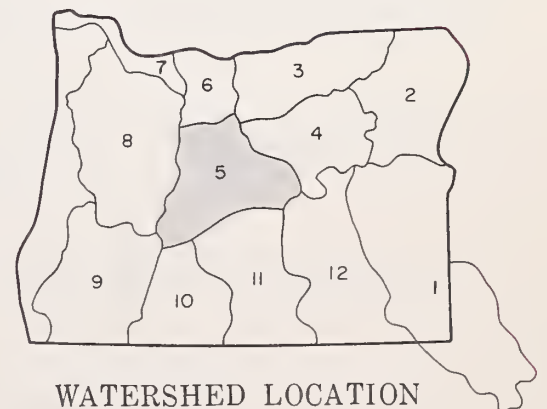
(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Partly estimated. (*) 1943-57 Adjusted average. (h) Nearest current data.

UPPER DESCHUTES, CROOKED WATERSHEDS



LEGEND

-  Watershed Boundary
-  Sub-watershed Boundary
-  Soil Conservation District Bdry.
-  County Boundary
-  Forecast Point
-  Snow Course
-  Soil Moisture Station



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1943-57 AVERAGE
Cascade Summit	4880	5/29	0	0.0	6.8	--



WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of
JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook for Hood River and Wasco counties remains only fair as it was on May 1st. The "short" snowpack has been reduced even farther by periods of warm weather during May but streamflow is still expected to exceed the low years of 1941 and 1944. Severe late season shortages are expected for lands served by smaller streams with no stored water.

SNOW COVER - Snow cover is almost gone below the 5,000 foot level. Periods of warm temperatures melted the snow high on the watershed and reduced Phlox Point snow measurement, at 5,600 feet elevation, from 83 inches of depth and 35.9 inches of water content on the 26th of April to 19 inches of depth and 10.3 inches of water on May 29.

SOIL MOISTURE - Watershed soils continued to soak up water from the snowmelt and rainfall and are much wetter in most areas than for several years.

RESERVOIR STORAGE - Clear Lake now has 5,600 acre feet in storage compared to 7,800 acre feet a year ago.

STREAMFLOW - The flow of Hood River near Hood River* was only 68 percent of average last month and 79 percent for the October-May period.

Streamflow forecasts remain unchanged from May 1. The White River is expected to flow 115,000 a.f. or 65 percent of the April-September period.

Hood River, West Fork near Dee, 111,000 a.f. or 64 percent of the same period and the main Hood River near Hood River, 160,000 a.f. or 60 percent of the May-September period.

Severe water shortages are expected on smaller streams without storage unless above normal precipitation occurs during the late summer months.

The next report on water supply conditions in this area will be issued at the close of the irrigation season in early October.

* Preliminary data from the U. S. Geological Survey, Portland, Oregon.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^c
NO.	NAME				
1210	Hood near Hood River ^d	160	May-Sept.	268	60
		128	May-July	213	60
1185	Hood, West Fork near Dee	111	April-Sept.	174	64
		97	April-July	151	64
1015	White below Tygh Valley	115	April-Sept.	178	65
		105	April-July	161	65

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1943-57 AVERAGE
Clear Lake	3500	5/29	0	0.0	--	--
Clear Lake Experimental	3500	5/29	0	0.0	--	--
Phlox Point	5600	5/31	19	10.3	63.7	--
Still Creek	3700	5/29	0	0.0	0.0	--

WATER SUPPLY OUTLOOK ^{expressed as "Poor", "Fair", "Average" or "Excellent"}

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch	Fair	Poor
Badger Creek	Fair	Fair
Dee Irrigation Dist.	Fair	Poor
East Fork Irrig. Dist.	Fair	Fair
Farmers Irrig. Dist.	Fair	Poor
Hood River Irrig. Dist.	Fair	Fair
Juniper Flat Irrig. Dist.	Fair	Fair
Middle Fork Irrig. Dist.	Fair	Poor
Mile Creeks	Fair	Poor
Mill Creek	Fair	Poor
Mount Hood Irrig. Dist.	Fair	Poor
Rock-Gate-Threemile Crs.	Fair	Fair
Tygh Creek	Fair	Poor
White River	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Clear Lake	--	5.6	7.8	--

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Partly estimated. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in base period.

(h) Water content for April 1 published as 3.0 and should have been 3.3.

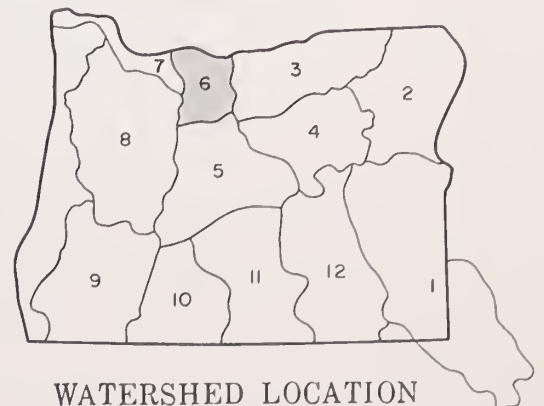
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course





WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE

OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The flow of the Columbia River at The Dalles, Oregon for the snowmelt season of 1963 will be the lowest since 1944, at about three-quarters of average, and among the lowest 10 percent of record. High water problems along the lower Columbia have been at a minimum. Peak flows are now occurring over most of the basin in early June and a rapid decline is anticipated. Water supplies will be considerably better than expected early in the snow season as a result of a relatively cool and wet period in April and the first half of May. Except for irrigated areas without storage, water supplies will be generally adequate. Storage for irrigation in principal tributaries is at capacity or will be in a few days.

SNOW COVER

Late season snowfall has been average or better, but not enough to make up for the deficiency of mid-winter. Remaining snowpack at the highest elevations is near average in the extreme northern section of the basin and along the Cascade range for this late date. Otherwise over the basin, remaining snow is less than average, following a pattern established in mid-winter.

SOIL MOISTURE

Mountain soil moisture is typical for this time of year -- generally wet at high elevations. Irrigated lands have had sufficient rainfall to reduce early season demands to less than usual.

STREAMFLOW

The winter flows for the Columbia at The Dalles* are as follows:

<u>Month</u>	<u>Percent of Average Discharge (1943-57)</u>		
October	111	Adjusted for storage	
November	116	"	"
December	124	"	"
January	93	"	"
February	145	"	"
March	95	"	"
April	73	"	"
May	73	"	"

* From preliminary data furnished by U. S. Geological Survey, Portland, Oregon.

Report prepared by
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STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
1057	Columbia at The Dalles	47,000	June-Sept.	64,300	73

HISTORICAL DATA (Columbia River at The Dalles)

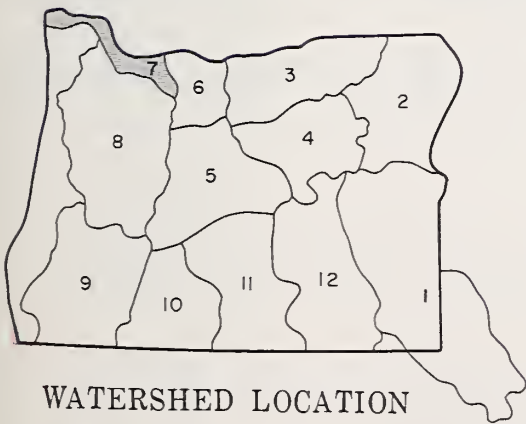
YEAR	STREAMFLOW ^c (1,000 A.F.)			PEAK ^e (1,000 c.f.s.)	DATE
	APR. - SEPT.	APR. - JUNE	MAY - JUNE		
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1943-57 Avg.	106,100	72,000	58,100	616	
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)^f

VANCOUVER ^g GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	940	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	890	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	840	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	790	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	750	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	700	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	660	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	630	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	590	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	560	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20	530	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	510	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	480	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	450	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	430	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Observed flow corrected for storage in F.D.R., Kootenai, Pend Oreille, Flathead, Hungry Horse, Lake Chelan, Coeur d'Alene and Grand Coulee Equalizer. (d) Not scheduled. (e) Observed peak. (f) Based on Corps of Engineers automatic water stage recorder data. (g) Vancouver Weather Bureau gage zero is 1.82' above M.S.L. All other readings are in feet above M.S.L.

LOWER COLUMBIA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- (50) River Miles
- Snow Course



"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

JUNE 1, 1963



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook has continued to improve for those lands served by reservoir stored water supplies. Periods of warm temperatures coupled with above normal rainfall produced more streamflow during May than was expected and brought reservoir storage up.

Smaller streams without stored water are still expected to have late season shortages unless timely rainfall continues during the summer.

SNOW COVER - Periods of abnormal temperatures high on the watershed coupled with heavy rains has depleted the snowpack and left it only at the highest points.

Phlox Point on Mount Hood at 5,600 feet elevation was the only course of 10 measured which had any snow. It had 19 inches of depth containing 10.3 inches of water content. Last year it contained 63.7 inches of water on June 1.

SOIL MOISTURE - Rains have continued to prime watershed soils to near the saturation point.

RESERVOIR STORAGE - Storage in six multi-purpose reservoirs operated by the Corps of Army Engineers is above average and slightly above last year at this time.

STREAMFLOW - The Middle Fork of the Willamette* flowed 119 percent of average for May and 89 percent since October 1.

Streamflow forecasts have raised slightly as a result of better than expected May flows and now range from 62 percent on the Clackamas at Big Bottom to 82 percent for the Middle Fork of the Willamette.

The McKenzie is forecast at 65 percent of the April-September flow at Vida and 67 percent at McKenzie Bridge.

The South Santiam is expected to flow 66 percent and the North Santiam 65 percent for the April-September period.

The Row is forecasted to flow 80 percent and the Willamette at Salem 75 percent of this same April through September period.

The next water supply report will be issued in early October.

* Preliminary data from the U. S. Geological Survey, Portland, Oregon.

Report prepared by
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Fair	Poor
Clackamas	Fair	Fair
McKenzie	Fair	Fair
Molalla	Fair	Poor
Santiam, North	Fair	Fair
Santiam, South	Fair	Fair
Willamette, Coast Fork	Fair	Fair
Willamette, Middle Fork	Fair	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Cottage Grove	30.0*	29.1	29.0	29.3
Detroit	299.9*	297.6	267.5	253.5
Dorena	70.5*	66.0	65.7	64.7
Fern Ridge	94.2*	95.2	93.8	87.2
Hills Creek Res.	200.0*	193.8	192.6	- -
Lookout Point	337.2*	326.0	318.2	- -

*Multiple purpose reservoir--space reserved primarily for flood runoff.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
2080	Clackamas at Big Bottom	115	April-Sept.	184	62
		93	April-July	150	62
2100	Clackamas at Estacada	550	April-Sept.	879	63
		480	April-July	763	63
2095	Clackamas above Three Lynx	425	April-Sept.	674	63
		365	April-July	578	63
1590	McKenzie at McKenzie Bridge	430	April-Sept.	640	67
		325	April-July	488	67
1625	McKenzie near Vida	885	April-Sept.	1362	65
		725	April-July	1120	65
2090	Oak Grove Fork above Power Intake	130	April-Sept.	198	66
		103	April-July	156	65
1545	Row near Dorena	91	April-Sept.	114	80
		87	April-July	109	80
1830	Santiam, North at Mehama ^d	630	April-Sept.	968	65
		555	April-July	866	64
1875	Santiam, South at Waterloo	430	April-Sept.	652	66
		400	April-July	616	65
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	750	April-Sept.	909	82
		660	April-July	804	82
1910	Willamette at Salem ^d	4095	April-Sept.	5461	75
		3655	April-July	4942	74

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Not surveyed. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course

10 0 10 20 30
SCALE IN MILES



WATERSHED LOCATION

Willamette Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1943-57 AVERAGE
Cascade Summit	4880	5/29	0	0.0	6.8	--
Clear Lake	3500	5/29	0	0.0	--	--
Clear Lake (Experimental)	3500	5/29	0	0.0	--	--
McCredie Springs	2120	5/29	0	0.0	0.0	--
Meridian Dam	750	5/29	0	0.0	0.0	--
Oakridge	1310	5/29	0	0.0	0.0	--
Phlox Point	5600	5/31	19	10.3	63.7	--
Railroad Overpass	2750	5/29	0	0.0	0.0	--
Salt Creek Falls	4000	5/29	0	0.0	0.0	--
Still Creek	3700	5/29	0	0.0	0.0	--

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of
JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook for the Rogue-Umpqua area has continued to improve during May and is now near average for lands served by stored water supplies. Above normal temperatures and rainfall produced higher than average May streamflow increasing reservoir storage while melting the already "short" snowpack even higher on the watersheds.

Late season water shortages are still expected for areas without stored water.

SNOW COVER - Periods of above normal temperature during May melted the snowpack high on the watershed. Snow cover remains at only the highest and most protected areas on the watershed.

SOIL MOISTURE - Upper watershed soils, close to the point of saturation, have assisted considerably in boosting runoff during May.

RESERVOIR STORAGE - Reservoir stored water of the Talent Irrigation District now totals 114,900 acre feet compared with 95,500 acre feet one year ago.

The Medford and Rogue River Valley Irrigation Districts have about 19,400 acre feet compared with 13,800 acre feet on June 1, 1962.

STREAMFLOW - The flow of Rogue River at Raygold* was 125 percent of average for May due to heavy precipitation and above normal temperatures over most of the watershed.

Streamflow forecasts have been raised 14 to 17 percent and the Rogue at Raygold is now forecasted at 82 percent or 700,000 a.f. for the May-September period. Grants Pass Irrigation District probably will not find it necessary to rotate canal pumping.

Water supplies for the Eagle Point Irrigation District have continued to improve although some late season shortages are still expected unless timely rainfall continues.

The North Umpqua below Lemolo Reservoir is forecast at 80 percent of the May-September average and the Applegate and Illinois Rivers are forecast at 78 percent for the April-September period.

The next water supply outlook will be issued at the close of the irrigation season early in October.

* Preliminary data furnished by the U. S. Geological Survey, Portland, Oregon.

Report prepared by
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Fair	Poor
Applegate River, Big	Average	Fair
Applegate River, Little	Average	Poor
Ashland Creek	Fair	Poor
Butte Creek, Big	Fair	Poor
Butte Creek, Little	Fair	Poor
Cow Creek	Fair	Poor
Deer Creek	Fair	Poor
Elk Creek	Fair	Poor
Emigrant Cr. (above Res.)	Fair	Poor
Evans Creek	Fair	Fair
Gold Hill Irrigation Dist.	Average	Fair
Grants Pass Irrig. Dist.	Average	Fair
Grave Creek	Fair	Fair
Illinois River, East Fork	Average	Poor
Illinois River, West Fork	Average	Poor
Jump-off-Joe Creek	Fair	Fair
Neil Creek	Fair	Poor
Red Blanket Creek	Fair	Poor
Rogue River	Fair	Fair
Sucker Creek	Fair	Poor
Table Rock Irrig. Dist.	Average	Fair
Thompson Creek	Fair	Poor
Wagner Creek	Fair	Poor
Williams Creek	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

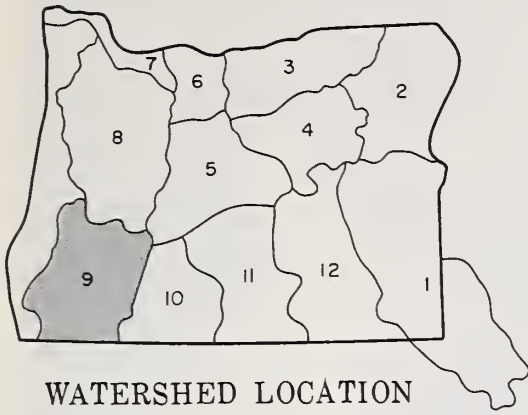
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Emigrant Gap	39.0	37.8	38.9	7.1
Fish Lake	7.8	6.3	6.0	6.9
Fourmile Lake	16.1	13.1	7.8	13.3
Howard Prairie	60.0	61.6	43.1	- -
Hyatt Prairie	16.1	15.5	13.5	12.9

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

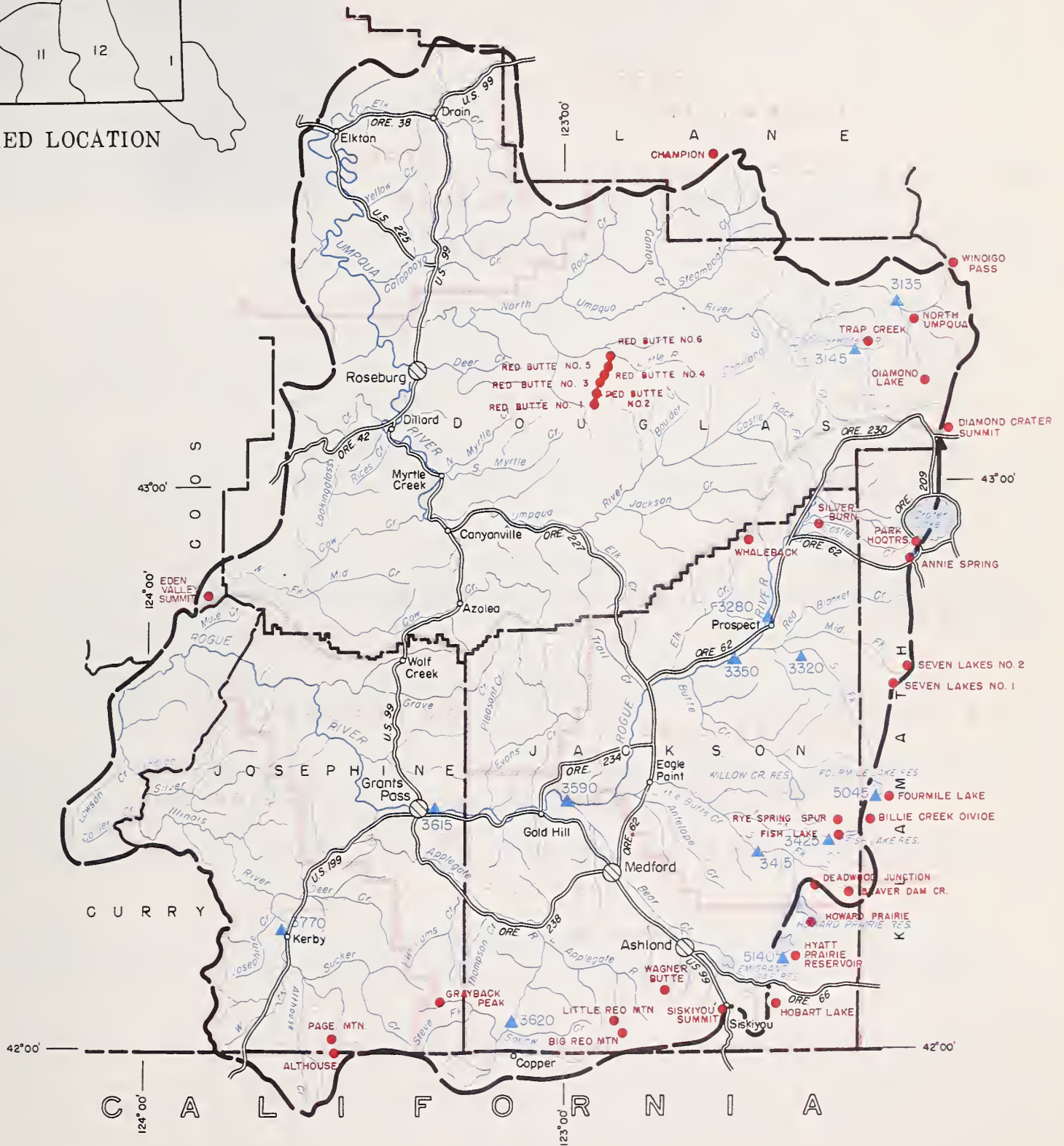
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^e
NO.	NAME				
3620	Applegate near Copper	102	April-Sept.	131	78
3145	Clearwater above Trap Creek ^d	60	April-Sept.	73	82
5045	Fourmile Lake net Inflow ^d	6.1	April-Sept.	7.4	82
5140	Hyatt Reservoir net Inflow ^d	***	April-Sept.	6.2	
3770	Illinois River at Kerby ^d	153	April-Sept.	196	78
		148	April-July	190	78
3425	Little Butte, N. Fk. at Fish Lake nr Lake Cr. ^d	***	April-Sept.	16.9	
3415	Little Butte, S. Fk. nr. Lake Creek	***	April-July	42	
	Note: Minimum flow will drop to 100 c.f.s. by ***				
3280	Rogue above Prospect	221	May-Sept.	270	82
		173	May-July	211	82
3320	Rogue, South Fork near Prospect ^d	54	May-Sept.	65	83
		45	May-July	53	84
3350	Rogue below South Fork	485	May-Sept.	584	83
		372	May-July	443	84
3590	Rogue at Raygold near Central Point	700	May-Sept.	733	82
		474	May-July	571	83
3615	Rogue at Grants Pass	565	May-Sept.	687	82
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	125	May-Sept.	157	80
	***Snow surveys pertinent to these forecast points have not been taken and use of the forecast equations is nullified.				

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Not Surveyed. (h) Construction. (i) 7 of 18 sampling points. (j) Partly estimated. (*) 1943-57 Adjusted average.

ROGUE, UMPQUA WATERSHEDS



10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry
- - - County Boundary
- ▲ Forecast Point
- Snow Course



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of
JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook in Klamath county continues to improve. Reservoirs received good increases in May as a result of much better stream-flow than expected, especially from the eastern side of the Basin. Some late season shortages are still expected for land without stored water.

SNOW COVER - Snow fell periodically during May and was melted by periods of warm temperatures. This year's "short" snowpack is disappearing fast and now remains at only the highest elevations.

SOIL MOISTURE - Good soil moisture has been a key factor this year in producing much better streamflow than would otherwise have resulted from a limited snowpack and about average precipitation since October 1.

RESERVOIR STORAGE - Reservoir storage now averages 111 percent of last year at this time and 91 percent of the 1943-57 average for June 1.

Clear Lake now holds 159,000 acre feet. Last year it held 109,100. Gerber now has 67,500 a.f. in storage and last year it held only 35,200 on June 1.

Upper Klamath Lake has 553,000 a.f. in storage and last year it held 557,500 at this time.

STREAMFLOW - Streamflow has been much better during May than expected. The May flow of streams from the eastern side of the Basin was almost double that expected on May 1.

As a result of good May streamflow, the forecasts have been raised 20 to 74 percent.

The inflow to Clear Lake for the May-June period is now expected to be 13,200 a.f. or 81 percent.

Gerber Reservoir inflow is forecast to be 8,000 a.f. or 118 percent for the May-June period; 6,600 acre feet of this came in May.

The Sprague River has been producing much better runoff than expected and the forecast is now raised to 200,000 a.f. or 105 percent for the May-September period.

Inflow to Upper Klamath Lake is expected to be 80 percent of average or 345,000 a.f. The Williamson below the Sprague forecast was raised to 270,000 a.f. or 82 percent of the May-September average.

Report prepared by
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Fair	Poor
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Fair
Sprague River	Average	Fair
Upper Klamath Lake	Average	Average
Williamson River	Fair	Poor

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Clear Lake	440.2	159.0	109.1	272.3
Gerber	94.0	67.5	35.2	62.3
Upper Klamath Lake	584.0	553.0	557.5	520.3

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
823	Clear Lake Reservoir Inflow ^g	13.2	May-June	16.3	81
8215	Gerber Reservoir Inflow ^g	8.0	May-June	6.8	118
5010	Sprague near Chiloquin	200	May-Sept.	191	105
5070	Upper Klamath Lake net Inflow ^g	345	May-Sept.	431	80
5025	Williamson below Sprague River	270	May-Sept.	330	82

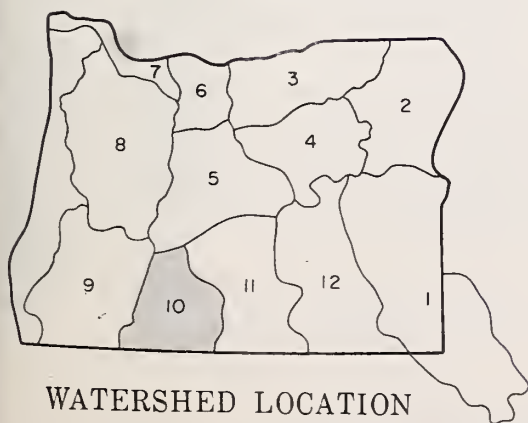
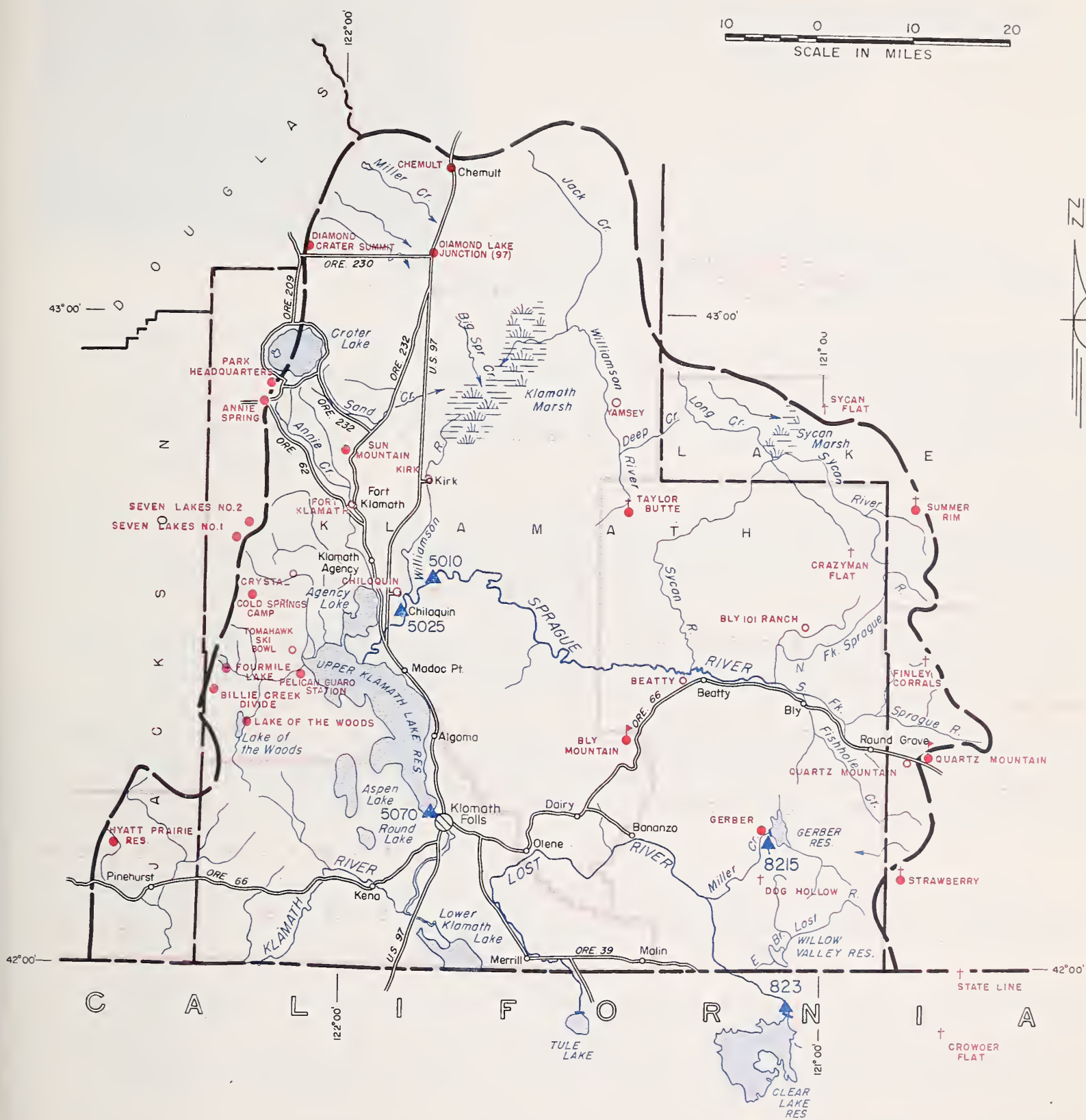
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bly Mountain	5090	42	14.0	4-26-63	11.5 ^j	11.4	11.4
Quartz Mountain	5320	48	15.3	4-26-63	7.3 ^j	6.3	6.8

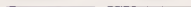
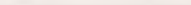
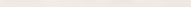
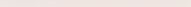





NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) From PP&L or USBR records of inflow. (h) Flashboards increase capacity to 513.0 (i) Water content partly estimated. (j) Nearest current data. (k) Not surveyed. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in the base period.

KLAMATH WATERSHEDS



LEGEND

- | | |
|---|----------------------------------|
|  | Watershed Boundary |
|  | Sub-watershed Boundary |
|  | Soil Conservation District Bdry. |
|  | County Boundary |
|  | Forecast Point |
|  | Snow Course |
|  | Aerial Snow Depth Gage |
|  | COPCO Snow Station |
|  | Soil Moisture Station |



WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of
JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1963 water supply outlook in Lake County has changed greatly this year from extremely gloomy at mid-winter to near average for most lands served by reservoir stored water supplies. Severe late season shortages are still expected for lands dependent on natural streamflow however, unless timely rains continue throughout the season.

SNOW COVER - Mountain snow cover melted rapidly when mid-May temperatures became excessively warm. Very little snow remains on the watershed and this can be found only at the highest and most protected locations.

SOIL MOISTURE - Upper watershed soils, close to the point of saturation, have assisted considerably in boosting the runoff from snowmelt and rainfall.

RESERVOIR STORAGE - Water is still running over the spillways of Drews and Cottonwood Reservoirs. Drews now holds 65,300 acre feet compared to 36,500 a.f. last year on June 1 and Cottonwood has 8,900 acre feet in storage and last year held only 4,300 acre feet.

STREAMFLOW - Streamflow forecasts have again been raised in this area as a result of above normal rainfall. The Chewaucan is now forecasted at 67 percent of the April-June average or 55,000 acre feet.

Deep Creek is expected to flow 57,000 acre feet or 80 percent for the same period.

Honey and Twentymile Creeks are forecasted at 86 and 75 percent or 14,000 and 15,000 respectively.

The inflow to Drews Reservoir is expected to be 35,000 acre feet or 103 percent of the April-July period.

Above normal rainfall on already wet soils has been the major contribution to the good increases in streamflow since April 1. These streams are expected to drop off rapidly and late season water shortages can be expected on smaller streams without storage unless timely rains continue throughout the summer.

The next water supply outlook will be issued at the close of the irrigation season in early October.

Report prepared by
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River	Fair	Poor
Crooked Creek	Fair	Poor
Deep Creek	Fair	Poor
Dry Creek	Fair	Poor
East Side Goose Lake	Fair	Poor
Guano Lake	Fair	Poor
Honey Creek	Fair	Poor
Lakeview Water Users Assn.	Average	Average
Rock Creek (Hart Mtn.)	Fair	Poor
Silver-Buck Creeks	Fair	Poor
Summer Lake	Fair	Poor
Thomas Creek	Fair	Poor
Twentymile Creek	Fair	Poor
Warner Lakes	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Cottonwood	8.7	8.9	4.3	3.8
Drew	63.0	65.3	36.5	56.2

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^b
NO.	NAME				
3840	Chewaucan near Paisley	55	April-June	82	67
3715	Deep above Adel	57	April-June	71	80
3385	Drew Reservoir net Inflow	35	April-July	34	103
3785	Honey near Plush	14.0	April-June	16.3	86
3660	Twentymile near Adel	15.0	April-June	20	75

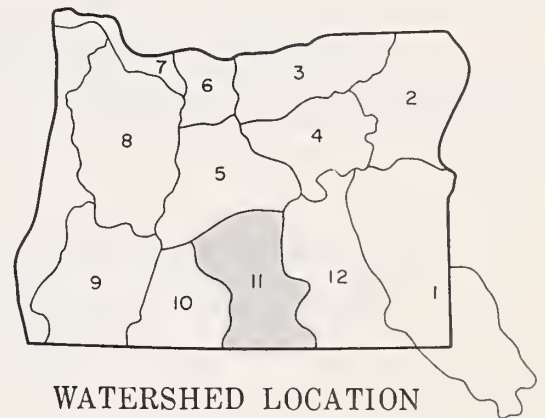
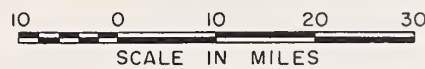
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek Quartz Mountain	5720	42	14.5	6-3-63	12.4	12.5	--
	5320	48	15.3	4-26-63	7.3 ^g	6.3	6.8

NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in base period. (g) Nearest current data.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- ▶ Soil Moisture Station



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

JUNE 1, 1963

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1963 water supply outlook in Harney County has changed greatly this year from extremely gloomy to reasonably satisfactory. Some late season shortages are still expected however unless timely rains continue throughout the summer.

SNOW COVER

Mountain snow cover melted rapidly when mid-May temperatures became excessively warm. The little snow that remains on the watersheds is found only at the highest and most protected areas.

SOIL MOISTURE

Upper watershed soils, close to the point of saturation, have assisted greatly in boosting the runoff from snowmelt and rainfall.

RESERVOIR STORAGE

Stock ponds and irrigation reservoirs received good inflows during May and are in good condition throughout the Basin.

STREAMFLOW

Runoff during May was much better than expected and forecasts of streamflow were adjusted accordingly.

The Silvies is now forecasted at 70 percent or 75,000 acre feet for the April-September period.

Silver Creek is expected to produce 20,000 acre feet of water in the April-July period or 77 percent of average.

The Blitzen is expected to flow 85 percent of the April-September average or 57,000 acre feet. Trout Creek is forecasted at 80 percent or 7,400 acre feet for the April-September period.

Report prepared by
W. T. FROST AND BOB L. WHALEY
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
209 S.W. FIFTH AVENUE - PORTLAND 4, OREGON

Most streams in the area are beginning to drop off and are expected to recede rapidly. Late season water shortages can be expected unless rains continue during the summer season.

The next water supply report will be issued at the close of the irrigation season in early October.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Fair	Poor
Cow Creek	Fair	Poor
Donner und Blitzen River	Fair	Poor
Mill-Coffeepot Creeks	Fair	Poor
Rattlesnake Creek	Fair	Poor
Rock Creek (Hart Mtn.)	Fair	Poor
Silver Creek	Fair	Poor
Silvies River	Fair	Poor
Soldier-Prather Creeks	Fair	Poor
Trout Creek	Fair	Poor
Whitehorse Creek	Fair	Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) June 1, 1963

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of June 1, 1963

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ^c
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	57	April-Sept.	67	85
		47	April-June	55	86
4030	Silver near Riley	20	April-July	26	77
3935	Silvies near Burns	75	April-Sept.	107	70
		74	April-June	103	72
4065	Trout near Denio	7.4	April-Sept.	9.2	80
		6.8	April-July	8.5	80

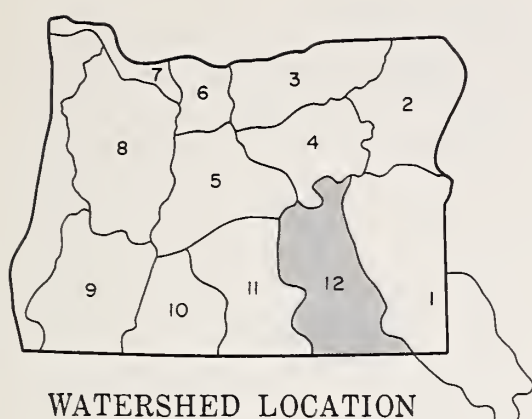
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Springs	5900	42	16.9	5-27-63	14.3	13.8	13.4
Fish Creek	7600	48	15.0	3-26-63	12.3 ^j	8.9	- -
Folly Farm	4450	36	12.5	3-28-63	9.9 ^j	11.6	- -
Silvies	6900	48	16.4	3-26-63	13.1 ^j	12.9	- -
Snow Mountain	6300	48	16.7	3-25-63	14.9 ^j	15.0	- -
Starr Ridge	5150	36	10.6	5-27-63	10.3	10.4	10.1
Stinking Water	4800	48	21.9	3-28-63	21.5 ^j	21.9	- -
Willow-Bald	5000	24	6.6	3-25-63	6.2 ^j	4.0	- -

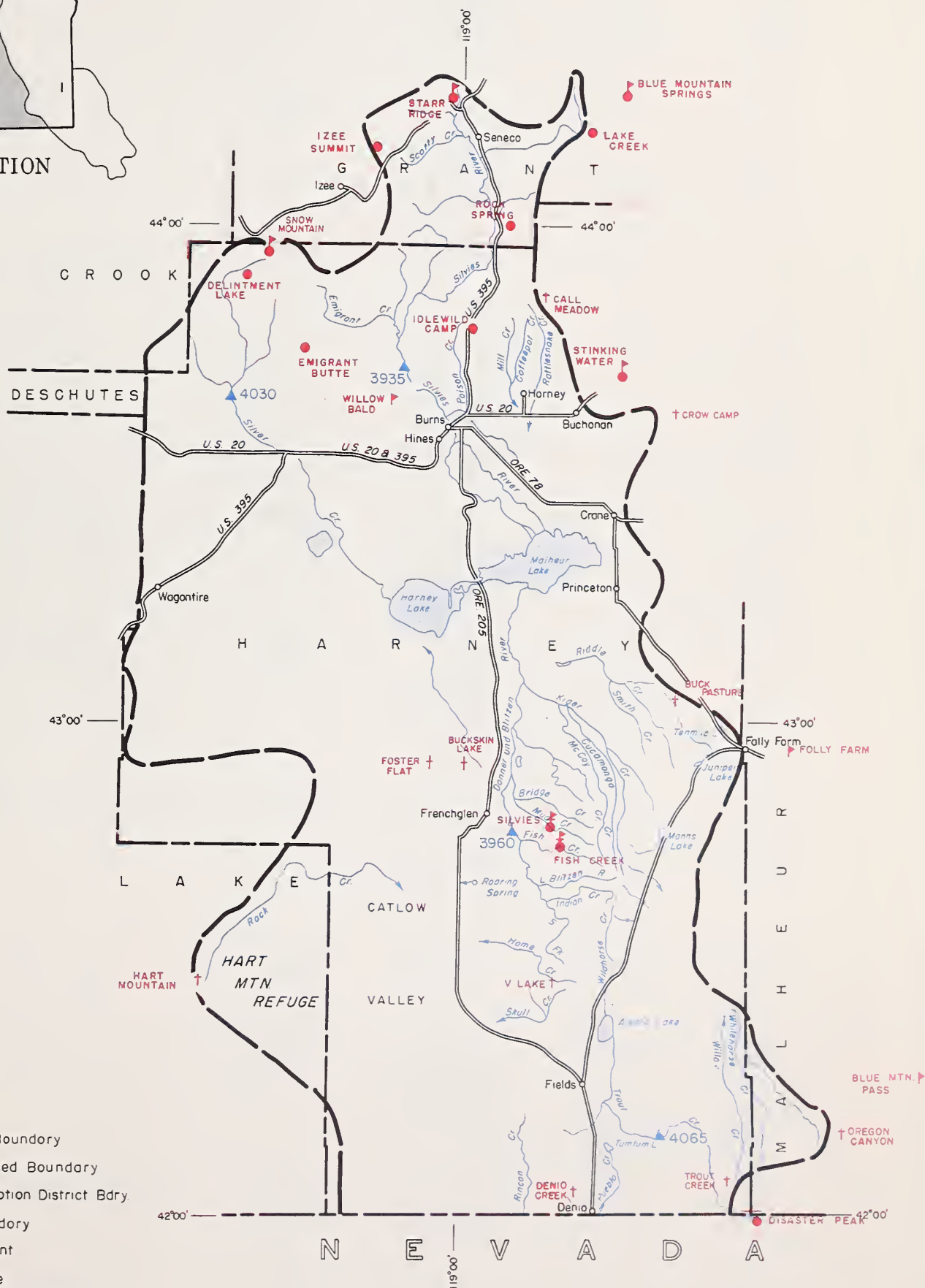
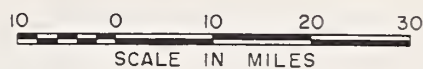
NOTE: The soil moisture figures published herein are not comparable to those published last year and earlier due to a change in the scale of evaluation. The new figures represent total moisture in the soil rather than moisture available to plants.

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Not surveyed. (h) Partly estimated. (i) No Fall measurement. (j) Nearest current data. (k) 2 miles south of regular course. (*) 1943-57 Adjusted average. (**) Average for 5 or more years in base period.









HARNEY BASIN WATERSHEDS



WATERSHED LOCATION



LEGEND

- | | |
|---|---------------------------------|
|  | Watershed Boundary |
|  | Sub-watershed Boundary |
|  | Soil Conservation District Bdry |
|  | County Boundary |
|  | Forecast Point |
|  | Snow Course |
|  | Aerial Snow Depth Gage |
|  | Soil Moisture Station |

PREVIOUSLY UNPUBLISHED OREGON SNOW SURVEY DATA
1962-63 Season

<u>SNOW COURSE Name</u>	<u>No.</u>	<u>Date</u>	<u>Depth (In.)</u>	<u>Water (In.)</u>
Cascade Summit	22F3	1/14/63	13	5.4
		2/13/63	15*	6.2
		3/13/63	16*	4.8
		4/12/63	22	9.3
Champion	22F9	1/14/63	2	0.2
		2/15/63	0	0.0
		3/13/63	8	1.0
		4/15/63	34	10.5
Clear Creek Dam	21D27	1/15/63	T	T
Cooper Spur	21D25	11/1/62	0	0.0
		11/15/62	T	T
		11/30/62	T	T
		12/17/62	4	1.4
		1/15/63	T	T
		2/15/63	0	0.0
Detroit Town	22E1	1/14/63	T	T
		2/12/63	0	0.0
		3/13/63	0	0.0
		4/11/63	0	0.0
Detroit Dam	22E2	1/14/63	T	T
		2/12/63	0	0.0
		3/13/63	0	0.0
		4/11/63	0	0.0
Golden Curry Creek	22F10	1/14/63	T	T
		2/15/63	0	0.0
		3/14/63	3	0.4
		4/15/63	4	0.4
Goodrich Lake	18E6	4/9/63	78	26.9
Hogg Pass	21E6	1/14/63	14	4.6
		2/12/63	18	7.4
		3/13/63	27	9.5
		4/11/63	50	20.2
Lake of the Woods	22G15	3/15/63	5	1.6
		4/15/63	9	2.3
Layng Creek R. S.	22F13	1/14/63	0	0.0
		2/15/63	0	0.0
		3/14/63	0	0.0
		4/15/63	0	0.0

SNOW COURSE Name	No.	Date	Depth (In.)	Water (In.)
Lund Park	22F12	1/14/63	0	0.0
		2/15/63	0	0.0
		3/14/63	0	0.0
		4/15/63	T	T
Marion Forks	21E4	1/14/63	2	0.2
		2/12/63	0	0.0
		3/13/63	T	T
		4/11/63	T	T
McCredie Springs	22F6	1/14/63	0	0.0
		2/13/63	0	0.0
		3/13/63	0	0.0
		4/12/63	0	0.0
Meridian Dam	22F8	1/14/63	0	0.0
		2/13/63	0	0.0
		3/13/63	0	0.0
		4/12/63	0	0.0
Mill City	22E3	1/14/63	T	T
		2/12/63	0	0.0
		3/13/63	0	0.0
		4/11/63	0	0.0
Oakridge	22F7	1/14/63	0	0.0
		2/13/63	0	0.0
		3/13/63	0	0.0
		4/12/63	0	0.0
Parkdale	21D23	11/1/62	0	0.0
		11/15/62	0	0.0
		11/30/62	T	T
		12/14/62	0	0.0
		1/15/63	0	0.0
		2/15/63	0	0.0
Pinnacle Ridge	21D29	1/15/63	T	T
Quartz Mountain	20G6	1/14/63	0	0.0
		2/15/63	0	0.0
		3/18/63	6	1.2
		4/15/63	4	0.6
Quartz Mtn. (PP&L)	9	1/14/63	0	0.0
		2/15/63	0	0.0
		3/18/63	8	1.6
		4/15/63	4	0.6
Railroad Overpass	22F5	1/14/63	0	0.0
		2/13/63	0	0.0
		3/13/63	0	0.0
		4/12/63	0	0.0

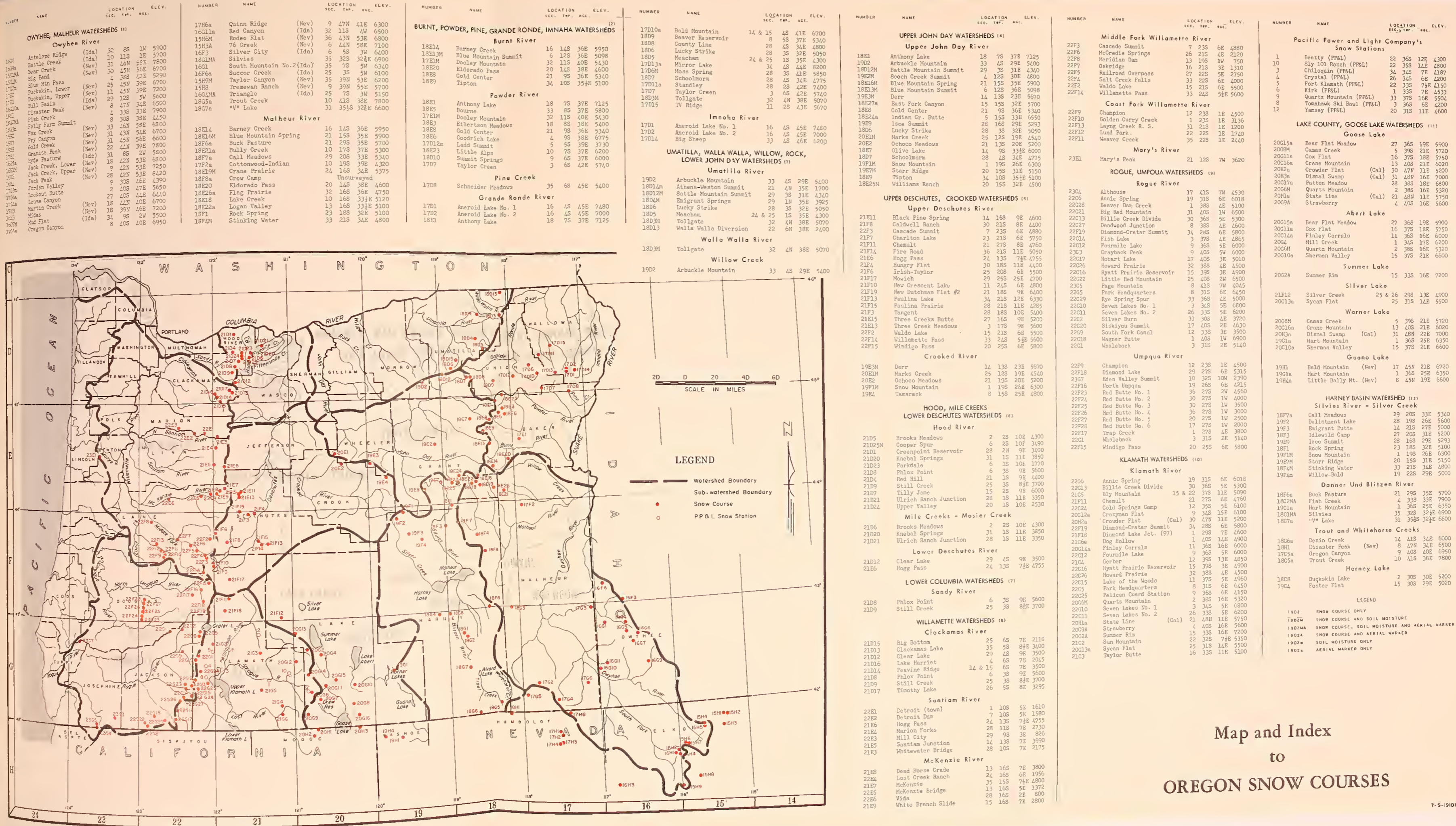
SNOW COURSE Name	No.	Date	Depth (In.)	Water (In.)
Salt Creek Falls	22F4	1/14/63	T	T
		2/13/63	0	0.0
		3/13/63	7	1.5
		4/12/63	T	T
Santiam Junction	21E5	1/14/63	1	0.2
		2/12/63	0	0.0
		3/13/63	4	0.8
		4/11/63	11	4.6
Siskiyou Summit	22G20	1/14/63	0	0.0
		2/15/63	0	0.0
		3/14/63	6	0.5
		4/13/63	0	0.0
Switchback	21D28	1/15/63	T	T
Upper Valley	21D24	11/1/62	0	0.0
		11/15/62	0	0.0
		11/30/62	T	T
		12/14/62	0	0.0
		1/14/63	0	0.0
		2/15/63	0	0.0
Weaver Creek	22F11	1/14/63	0	0.0
		2/15/63	0	0.0
		3/14/63	T	T
		4/15/63	3	0.3
Whitewater Bridge	21E3	1/14/63	T	T
		2/12/63	0	0.0
		3/13/63	0	0.0
		4/11/63	0	0.0

ERRATA: 1963 SNOW MEASUREMENTS PUBLISHED IN ERROR

	<u>Date</u>	<u>Depth (In.)</u>	<u>Water (In.)</u>
Bald Mountain (Nev.) 19H1			
Previously Published	2/26/63	27	9.4
Correct Data	3/1/63	0	0.0
Beaver Reservoir 18D9			
Previously Published	12/28/62	6	1.3
Correct Data	12/28/62	6	1.4
Previously Published	3/28/63	17	7.2
Correct Data	3/28/63	17	7.3

ERRATA: 1963 SOIL MOISTURE MEASUREMENTS PUBLISHED IN ERROR

	<u>Capacity</u>	<u>Date</u>	<u>This Year</u>
Battle Mountain Summit 18D12			
Previously Published	16.8	12/28/62	11.9
Correct Data	13.8	12/20/62	11.7
Quartz Mountain 20G6			
Previously Published		3/29/63	10.9
Correct Data		3/29/63	7.2



Map and Index to OREGON SNOW COURSES

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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SOIL CONSERVATION SERVICE
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PORTLAND 4, OREGON

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